

Photospot:

Aberrant Mascarene Paradise Flycatcher *Terpsiphone bourbonnensis* in Mauritius

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Observation d'un Tchitrec des Mascareignes *Terpsiphone bourbonnensis* au plumage aberrant. Le Tchitrec des Mascareignes *Terpsiphone bourbonnensis* est endémique aux îles de la Réunion et de Maurice. En mars 2013, un individu au plumage aberrant a été photographié à l'île Maurice. Cet individu était presque entièrement dépourvu de pigmentation, mais possédait un iris de couleur normale et certaines parties du plumage étaient quelque peu colorées. Cette aberration est probablement due à une réduction qualitative d'eumélanine, appelée 'Brown'.

Mascarene Paradise Flycatcher *Terpsiphone bourbonnensis* is endemic to the islands of Réunion, where the nominate subspecies is common, and Mauritius (subspecies *desolata*), where it is less numerous (BirdLife International 2014). In normal-coloured birds the back, tail

and wing feathers are rufous-brown; the vent, belly, breast, nape and throat are grey; in females the cap is dark grey, while in males it is iridescent black; legs and bill are dark grey to blue; the irides are black (Fig. 1). In March 2013 an aberrant-coloured individual was observed in



Figures 1–2. Male Mascarene Paradise Flycatcher *Terpsiphone bourbonnensis desolata* with normal-coloured plumage, Chamarel, Mauritius, 3 July 2013 (Jacques de Spéville) and La Réunion, 18 December 2010 (Dubi Shapiro)

Tchitrec des Mascareignes *Terpsiphone bourbonnensis desolata* mâle au plumage normal, Chamarel, île Maurice, 3 juillet 2013 (Jacques de Spéville) et La Réunion, 18 décembre 2010 (Dubi Shapiro)

the easternmost part of the Black River Gorges National Park in Mauritius by field workers of the Mauritian Wildlife Foundation.

This individual was completely white apart from the cap, which had a brownish hue, and the primaries, secondaries and tail feathers, which were a shade of pale brown, especially where they overlapped. The underwing-coverts were pale grey and the legs and bill were also pale. However, the irides were normally coloured (Figs. 2–3). The individual appeared inquisitive, not territorial and, on a second visit, reacted with subsong to playback, indicating that it might be a female, given that males generally react more aggressively (pers. obs.).

In birds the two main pigments are eumelanin, responsible for black, grey and dark brown colours, and pheomelanin, which is responsible for reddish-brown to pale buff colorations



Figures 3–4. Mascarene Paradise Flycatcher *Terpsiphone bourbonnensis desolata* probably with the pigment deficiency Brown, Black River Gorges National Park, Mauritius, 23 April 2013 (Johannes Fischer)

Tchitrec des Mascareignes *Terpsiphone bourbonnensis desolata* ayant probablement le défaut de pigmentation 'Brown', Parc National des Gorges de la Rivière noire, île Maurice, 23 avril 2013 (Johannes Fischer)

(McGraw 2005 *et al.* 2005). Albinistic individuals completely lack both melanins in their feathers, eyes and skin (van Grouw 2006, 2012, 2013). This flycatcher is not an albino because the irides were normally coloured and some feathers pigmented. Leucism, a local but complete lack of both melanins in only the feathers and skin (van Grouw 2006, 2012, 2013), can also be excluded because of the reduced, but not complete lack of pigmentation. The most likely explanation for this bird's coloration is a mutation known as Brown, which causes a qualitative reduction of eumelanin. Birds appear paler than normal and become increasingly so because the not-fully oxidised eumelanin bleaches in sunlight, thus parts that are less exposed to sunlight are darker. Phaeomelanin is not affected (van Grouw 2006, 2012, 2013). Thus Brown seems a likely explanation as the overlapping parts of the plumage appear darker and the irides are normally coloured. The grey hue to the cap can be explained by a higher concentration of eumelanin in this plumage tract. The aberration could also be caused by a quantitative reduction in melanins since in these mutations the plumage bleaches as with Brown, but such aberrations are rarer (van Grouw 2006, 2012, 2013).

This is the first record of such an aberration in this species. Birds expressing Brown have been shown to reproduce successfully (van Grouw 2012). However, colour can affect fitness (Baker *et al.* 1978, Galeotti *et al.* 2003). Furthermore, Brown is a single-gene mutation and recessively

sex-linked (i.e. almost all birds expressing Brown are females). This supports our presumption that the bird in question was a female. It will be interesting to see if this aberration persists within the population.

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